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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,362

06/09/2006

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038788.57734US

1661

23911 7590 01/13/2009
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EXAMINER

XU, LING X

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

01/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,362	Applicant(s) HIRANO ET AL.	
	Examiner Ling Xu	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) 17, 18 and 24-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/9/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 19-23, in the reply filed on 12/29/2008 is acknowledged. Applicant's traversal has been fully considered and is persuasive. The previous restriction dated 11/28/08 has been withdrawn. However, a new restriction is required under 35 U.S.C. 121 and 372 as set forth below:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 17-18, drawn to a glass substrate.

Group II, claim(s) 19-23, drawn to an article.

Group III, claim(s) 24, drawn to a method.

Group IV, claim(s) 25-32, drawn to a coating liquid.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Where a group of inventions is claimed in an application, the requirement of unity of invention shall be fulfilled only when there is a special technical relationship among those inventions involving one or more of the same corresponding technical features, which define a contribution over the prior art. See 37 CFR 1.475. The special technical

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feature of the present invention, the hydrolysis product of a hydrolysable silicon compound and a hydrolysis product of a hydrolysable zirconium compound or titanium compound, does not define a contribution over the prior art, as is revealed by Nakamura et al (JP-11158648), see the abstract. Consequently, a lack of unity of invention exists. See 37 CFR 1.475 and MPEP 1850.

The election of Group II, claims 19-23, made by the Applicants with traverse in the reply filed on 12/29/2008 is considered as a provisional election. The election /restrictions have not been made final in this office action. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-18 and 24-32 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funadokoro et al (JP-2001192242, translation included) in view of Nakamura et al (JP-11158648, translation included).

Regarding claims 19-21, Funadokoro discloses a laminated glass comprising an inorganic glass substrate, an urethane film, and a primer layer of aminosilane formed between the glass substrate and the urethane film (translation, claims 1-4 and page 3 [0021]).

Funadokoro does not disclose that the primer layer comprising the hydrolysis product of silicon and zirconium or titanium compound as recited in claim 19.

Nakamura teaches a surface of a base material such as glass is treated with a coating (translation, page 4, [0011]) ("primer layer") comprising at least one of the compounds or their products of hydrolysis containing silicon, aluminum or titanium. The at least one of the compounds or their products of hydrolysis have a general formula: $(F-1)=(R_n)X(OR')^{(m-n)}$ (where R is an alkyl group, alkenyl group, or phenyl group, R' is an alkyl group, X may be Ti, n is 0-3, and m is 4 in the case X is Si or Ti).

Nakamura also teaches that the two or more mixtures of the compound containing silicon, aluminum, and titanium can be used (page 2, [0004]).

Nakamura further teaches that the surface treated base material has improved properties such as antifouling, dustproof, lubricity, and water/moisture proof ('anti-fogging') properties (abstract and translation, [0001]).

Therefore, it would have been obvious to one of ordinary skilled in the art to have the glass substrate of Funadokoro surface treated with the mixture of the hydrolysis

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compounds containing silicon and titanium as suggested by Nakamura in order to provide the laminated glass article with improved properties such as antifouling, dustproof, lubricity, and water/moisture proof.

Nakamura does not specify the ratio of the hydrolysable silicon and titanium present in the mixture. However, it would have been obvious to one of ordinary skilled in the art to discover the workable or optimum ratio range by routine experimentation. Generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

Regarding claim 22, it should be noted that claim 22 is a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the combination of Funadokoro and Nakamura teaches the same anti-fogging article as claimed, the combination of Funadokoro and Nakamura meets the claimed product limitations even through the product disclosed by Funadokoro and Nakamura may be made by a different process.

Regarding claim 23, as stated above, the combination of Funadokoro and Nakamura teaches the anti-fogging article comprising the same layered structure as claimed, accordingly, the same anti-fogging article would also have the same properties as claimed including the water-absorptive property as recited in claim 23. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). When the structure recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent. MPEP 2112.01.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling Xu whose telephone number is 571-272-7414. The examiner can normally be reached on 8:00 am- 4:30 pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ling Xu
Primary Examiner
Art Unit 1794

/Ling Xu/
Primary Examiner, Art Unit 1794

Lx
January 12, 2008